Introduction

The Kentucky Health Information Exchange (KHIE) offers the Commonwealth an unprecedented opportunity to advance health information technology and support healthcare providers in adopting and implementing electronic medical records (EMR). Through coordinating the delivery of more efficient care via electronic health record (EHR) exchange, the KHIE will improve patient health outcomes and population health. It will also enable healthcare providers to achieve stage 1 meaningful use.

Background

Governor Steve Beshear issued an Executive Order in August, 2009 establishing the Governor's Office of Electronic Health Information (GOEHI) in the Cabinet for Health and Family Services (CHFS) to oversee the advancement of health information exchange in Kentucky. Work immediately began on the technical infrastructure of the KHIE. Funding for this momentous task was received from both the Centers for Medicare and Medicaid Services (CMS) and the American Recovery and Reinvestment Act (ARRA). In addition to the funding opportunity, the ARRA provided a roadmap and guidance to the development and implementation of the nationwide electronic health information system. As a result, almost every state in the United States is pushing to strengthen their efforts in transforming the nation's healthcare system from paper records to electronic.

Kentucky received over 9 million dollars to advance the use of electronic health information exchange and support eligible healthcare providers across the state in achieving stage 1 meaningful use of certified technology. Eligible providers who demonstrate meaningful use of certified EMRs will receive incentive payments beginning in January, 2011.

In light of the benefits and consequences to the healthcare providers and consumers alike, KHIE has a solid commitment to support statewide adoption of electronic health information exchange. To that end, KHIE provides a common, secure electronic information infrastructure. The KHIE architecture meets national standards to ensure interoperability across various health systems and connectivity to the National Health Information Network (NHIN). The system affords healthcare providers the functionality to support preventive health and disease management through alerts, messaging, and other tools. The design of KHIE is flexible in that, as criteria for determining meaningful use expands beyond stage 1, functionality will be added to support providers in achieving meaningful use.

The KHIE provides a baseline set of functions available across the state to support the exchange of electronic health information. Consumption of health information exchange services by one stakeholder does not reduce availability for others, and no healthcare stakeholder can be effectively excluded from appropriately using interoperable health information exchange services. The value of information increases with use, and the value of one set of information increases when linked with other information. Core components of KHIE include a master-patient index, record-locator service, security, provider-user authentication, logging, audits and alerts. The focus of KHIE is on improving the health, quality and safety of healthcare for Kentucky's residents and visitors through the provision of a statewide, interoperable health information exchange.

Connectivity

The KHIE offers participating healthcare providers two options of connectivity based on their current practices and technical capabilities. The first option is based on the ability to send and receive Continuity of Care Documents (CCDs) via defined industry standards. Recognizing that this is an emerging standard and that many Healthcare Information Systems (HIS) do not yet have this capability in their current releases, the KHIE provides an alternate connectivity through standard HL7, ADT, clinical transaction, and order messages. The second option is commonly used in information exchange today and provides the same capabilities for providers seeking to demonstrate stage 1 meaningful use. These two options are detailed in the following sections of this welcome guide.

Connectivity Option 1: Participants with CCD Capability

Healthcare providers who have the capability of sending or receiving CCDs connect via the web services provided by the KHIE. In this option, the CCD will be created by the HIS upon receiving an inquiry from the KHIE, and will then be consolidated with CCDs from other providers and with data extracted from Edge Servers described in Option 2. The consolidated CCD will then be returned to the inquiring provider's HIS, or displayed in the KHIE Community Virtual Health Record, also described in Option 2. Functional specifications required for this connectivity model are in the KHIE Participant Connectivity Guide, which can be found on the GOEHI website and will be discussed during the on-boarding process.

Connectivity Option 2: Participants without CCD Capability

Healthcare providers choosing this option will be connected to the KHIE utilizing Edge Server technology with VPN tunnel connectivity. This process includes a standard series of HL7 transactions sent via the healthcare provider's HIS to a secure Edge Server for storage and retrieval. The Edge Server is logically dedicated to and managed by that individual provider, and not co-mingled with other providers' data. From the Edge Server, the data is made available to the KHIE for exchange with other connected healthcare providers via inquiry, or through the KHIE Community/Virtual Health Record (VHR). The KHIE Community VHR is a web-based portal that may be distributed to those healthcare providers who require access to the patient's summary health data, but do not have the capability of sending or receiving a CCD. As the provider's HIS begins the implementation of the capability to consume a CCD, KHIE staff will assist in that transition.

To initiate connectivity under this option, the healthcare provider will need to complete the following forms, which will be forwarded during the 'onboarding' process:

- VPN Tunnel Information Connectivity Worksheet
- Readiness Assessment Document (hospitals)
- EMR Interface Checklist (physician practices)
- Configuration Checklist
- Physician Address Book

Information from these forms will be used to optimize the transactions utilized for connectivity to the KHIE. Upon completion and submission of these forms, a representative from KHIE contacts the provider and begins the process of obtaining connectivity.

The KHIE staff will be available at any time to discuss any of these options, or answer any questions about KHIE utilization at (502) 564-7992.